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Notice of Allowability

Application No.

09/478,567

Examiner

Russell Kallis

Applicant(s)

RAO ET AL.

Art Unit

1638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 1/21/2005.
2. ☒ The allowed claim(s) is/are 1-2,5-9,11,14-20 renumbered 1-15.
3. ☒ The drawings filed on 09 August 2004 and 21 January 2005 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date <u>2/16/2005</u> . |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

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EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Leigh Thorne on 2/25/2005.

The application has been amended as follows:

Claims 3 and 10 have been canceled.

In the claims:

Claim 1. (currently amended) A nucleic acid molecule comprising a nucleotide sequence which encodes an engineered VSP β protein comprising an amino acid sequence which differs from the amino acid sequence of [a] the native VSP β protein, wherein said engineered protein has an altered amino acid composition in comparison to said native protein, wherein said altered amino acid composition comprises an increase in the content of an essential amino acid selected from the group consisting of methionine, leucine, isoleucine and valine [content] to at least about 5% to about 10% [of the amino acid content of said engineered protein,] compared to said native protein and wherein said engineered protein binds to at least one antibody, monoclonal antibody, or antibody fragment, which binds to said native VSP β protein, wherein said native VSP β protein is [VSP β as] the protein set forth in SEO ID NO: 1.

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Claim 2. (currently amended) The nucleic acid molecule of claim 1, wherein said [altered amino acid composition comprises an] increase in an essential amino acid [content] is to at least about 10%.

In Claim 6, line 2, change "Claim 3" to --Claim 1--.

Claim 8. (currently amended) A stably transformed plant having inserted into its genome a nucleotide sequence which encodes an engineered VSP β protein comprising an amino acid sequence which differs from the amino acid sequence of [a] the native VSP β protein, wherein said engineered protein has an altered amino acid composition in comparison to said native protein, wherein said altered amino acid composition comprises an increase in the content of an essential amino acid selected from the group consisting of methionine, leucine, isoleucine and valine [content] to at least about 5% to about 10% [of the amino acid content of said engineered protein,] compared to said native protein and wherein said engineered protein binds to at least one antibody, monoclonal antibody, or antibody fragment, which binds to said native VSP β protein, wherein said native VSP β protein is [VSP β as] the protein set forth in SEO ID NO: 1.

Claim 9. (currently amended) The plant of Claim 8, wherein said [altered amino acid composition comprises an] increase in an essential amino acid [content] is to at least about 10%.

Claim 11. (currently amended) The plant of Claim 8, wherein said [altered amino acid composition comprises an] increase in the content of an essential amino acid is an increase in methionine content to at least about 10%.

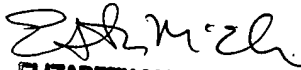
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Russell Kallis whose telephone number is (571) 272-0798. The examiner can normally be reached on M-F 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson can be reached on (571) 272-0804. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Russell Kallis Ph.D.
February 16, 2005


ELIZABETH MCELWAIN
PRIMARY EXAMINER